

Office Memorandum • UNITED STATES GOVERNMENT

TO : The Files [] DATE: 30 July 1953

FROM : []

SUBJECT: Test and evaluation of [] Facsimile Cyphering equipment,
progress report concerning

REFER: Ltr from AD/OC to AD/OCD dtd 21 January 1953

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1. Reference established the authority and outlined procedures for the conduct of subject tests.

2. In compliance with provisions contained in the reference, [] of R&D was assigned to NSA for training in connection with the subject tests on 15 April 1953. Arrangements concerning operating personnel, space, and security requirements in "M" building and 350 26th St., were made with [] Chief, Machine Division, OCD, and coordinated with [] Chief, Security Division, OC.

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3. On 11 June 1953 the writer was informed by [] of NSA that [] had completed his training and that the equipment would be delivered within two weeks. On 18 June, the writer, in company with [] of OC-S, surveyed the installation areas in "M" building and 350 26th Street. At that time the following list of names of OCD operating personnel was submitted for cryptographic clearances:

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A.
B.
C.
D.
E.
F.
G.
H.

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4. On 23 June 1953 the equipment was delivered by NSA transport under armed guard: one terminal to room 11, 350 26th Street, and one terminal to room 1416 "M" building. Arrangements were completed for using the secure cable installation between the two buildings. [] from NSA, and [] of CIA proceeded to install the equipment. The associated cryptographic aids were delivered to [] office a few days later.

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5. From 23 June to the present date, the equipment has been subject to considerable and varied failures. A close log is being maintained for both terminals. The lack of facilities offered in side-by-side operation has lengthened trouble-shooting time. A few of the difficulties experienced to date follow:

- 1 -

DOC	16	REV DATE	14/3/80	BY	037169
ORIG COMP	33	API	56	TYPE	2
ORIG CLASS	S	CLASS	2	REV CLASS	C
JUST	22	PLAT REV	2010	AUTH:	HR 10-2

SECURITY

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SECURITY INFORMATION

30 July 1953

Subject: Test and evaluation of [] Facsimile Cyphering equipment,
Progress report concerning (Cont'd)

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- A. Low AC line voltages at both terminals. The condition was so poor in room 11, 350 26th Street, that a Sorensen AC regulator had to be inserted.
- B. Random noise level on the privacy line was sufficiently high to necessitate filters.
- C. Vacuum tube replace rate high, probably caused by low AC line voltage at both terminals. NSA is operating with approximately 128 volts AC available. AC line voltage in room 11, 350 26th St., was 108 volts, and in 1416 "M" building it varied between 112 and 115 volts.
- D. Filament transformer failure, caused by faulty transformer construction. Terminal board insulator tends to carbonize at high temperatures presenting a high resistance short.

7. On 29 July the writer was contacted by [] of OC-S concerning the cryptographic check-out for the personnel listed in paragraph 3 above. A lecture covering the operating procedures was given by [] of NSA at 350 26th Street, Thursday, 30 July, at 10:00. STAT

8. With respect to future plans for the subject tests, the writer expects the tests to continue for at least sixty days during which time sufficient information should become available concerning the applications and limitations of the equipment to satisfy NSA and CIA. Besides testing the subject equipment in conjunction with OCD Intellofax System, it is planned to test the subject equipment in conjunction with the [] medium speed page size facsimile equipment. The [] equipment is due to be delivered to the Agency around 1 August. 50X1 50X1

9. The writer expects to continue to monitor the subject tests and to make progress reports for the file on a monthly basis.

10. The writer ^{has} requested policy decision on the conduct, status and priority of the projected tests involving the [] facsimile equipment. [] engineers have volunteered to visit the Agency to assist in setting up the facsimile equipment. The engineers involved have been cleared by the Agency for work through Secret. NSA engineers have agreed to assist in coordinating the tests. 50X1

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